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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/561,842	12/22/2005	Masaki Yoda	1000023-000095	5530

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BUCHANAN, INGERSOLL & ROONEY PC  
POST OFFICE BOX 1404  
ALEXANDRIA, VA 22313-1404

EXAMINER
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HINES, LATOSHA D

ART UNIT	PAPER NUMBER
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1797

NOTIFICATION DATE	DELIVERY MODE
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06/24/2010

ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

ADIPFDD@bipc.com  
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<b>Office Action Summary</b>	<b>Application No.</b> 10/561,842	<b>Applicant(s)</b> YODA ET AL.	
	<b>Examiner</b> LATOSHA HINES	<b>Art Unit</b> 1797	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 06 April 2010.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-4 and 10 is/are pending in the application.
- 4a) Of the above claim(s) 10 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                    | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)         | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 04/06/2010 has been entered.

### ***Election/Restrictions***

2. Newly submitted claim 10 is directed to an invention that is independent or distinct from the invention originally claimed for the following reasons:
3. Claim 10 is drawn to a method for producing the polyethylene wax of claim 1.
4. Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claim 10 is withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Art Unit: 1797

4. Claims 1-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over TOYODA (US 2003/0171481).

TOYODA discloses a polyolefin wax for a coating material which comprises a specific ethylene copolymer. The ethylene copolymer is an ethylene homopolymer or a copolymer of ethylene and an  $\alpha$ -olefin or more than one  $\alpha$ -olefin. Examples of the  $\alpha$ -olefin include propene, 1-butene, 1-pentene, and so on (paragraph 0035-0036). The ethylene polymer, which is an ethylene homopolymer or an ethylene/ $\alpha$ -olefin copolymer, has a number average molecular weight within the range of from 400 to 8000 as measured by gel permeation chromatography (GPC), and the ratio  $M_n/M_w$  is no greater than 4 (paragraph 0021). The ethylene copolymer is manufactured using a vanadium catalyst or a metallocene catalyst (paragraph 0017). The polyolefin wax for coating material comprises the ethylene copolymer which is solid at room temperature and becomes a low-viscosity liquid at or above a temperature of from 80 to 120°C (paragraph 0044). The composition easily satisfies the formula in claim 2 ( $-0.53t_s + 62 > Y > -0.53T_s + 53$  which equals  $9 > Y > -9$ ). In paragraph 0042 TOYODA discloses that in the ethylene copolymer Y is the penetration hardness (dmm).

TOYODA discloses metallocene compounds which constitutes the metallocene catalyst is a metallocene compound of a transition metal selected from Group IV of the periodic table.

Art Unit: 1797

TOYODA gives various examples of the production of ethylene  $\alpha$ -olefin copolymers. Examiner reasons it would have been obvious to one having ordinary skill in the art to prepare polyethylene waxes when using the data of examples a(1) through a(24) of TOYODA with the combination of information throughout the reference.

TOYODA also discloses production of modified ethylene copolymer for example a polyethylene wax (~ 6.81 parts by weight) with 1-butene. As a result, a maleic-anhydride-modified polyethylene, having an acid value of 60 KOH (mg/g) (~.6 KOH mg/g when using parts by weight of polyethylene wax), an intrinsic viscosity  $[\eta]$  of 0.17 (dl/g) (measured at the 135°C in decalin) and a melting point of 110°C was obtained (paragraphs 0278-0280).

Once the amount of polyolefin wax has been contained it can be added in any step of the processes conventionally used for manufacturing printing inks such as kneading to form an ink or the polyolefin wax can be blended with a material that has undergone dispersion and kneading processes to form an ink (molding) (paragraph 0110).

Applicants' arguments previously filed on August 14, 2009 have been fully considered but they are not persuasive.

Applicants argued the reference applied under 35 USC 103, Toyoda, fails to explicitly or implicitly teach the specific softening point and density of present claim 1 resulting in high shrinkage ratios. This is not deemed to be persuasive because the examiner is not relying upon just the examples of Toyoda but on

Art Unit: 1797

what is taught in the entire disclosure to one of ordinary skill. The examiner is of the position that Toyoda meets the limitations of claim 1 throughout the entirety of the reference, case in point: (1) gel permeation chromatography (GPC), Mn/Mw is no greater than 4 (paragraph 0021) (2) ethylene copolymer is an ethylene homopolymer or a copolymer of ethylene and an  $\alpha$ -olefin or more than one  $\alpha$ -olefin (3) the polyolefin wax for coating material comprises the ethylene copolymer which is solid at room temperature and becomes a low-viscosity liquid at or above a temperature of from 80 to 120°C (softening point) (paragraph 0044) (4) the penetration hardness is  $-9 < Y < 9$  (5) the density is in the range of 850 kg/m<sup>3</sup> to 980 kg/m<sup>3</sup>. The results set forth in the examples in the Declaration under 37 CFR 1.132 have been carefully considered; however, the invention of Toyoda is not limited to the examples. Thus the examiner maintains the position that Toyoda meets the limitations of claims 1-4.

The examiner is of the position a reference is good not only for what it teaches but also for what one of ordinary skill might reasonably infer from the teachings. *In re Opprecht* 12 USPQ 2d 1235, 1236 (CAFC 1989); *In re Bode* USPQ 12; *In re Lamberti* 192 USPQ 278; *In re Bozek* 163 USPQ 545,549 (CCPA 1969); *In re Van Mater* 144 USPQ 421; *In re Jacoby* 135 USPQ 317; *In re LeGrice* 133 USPQ 365; *In re Preda* 159 USPQ 342 (CCPA 1968). In addition, "A reference can be used for all it's realistically teachings and is not limited to the disclosure in its preferred embodiments" See *In re Van Marter*, 144 USPQ 421.

***Response to Arguments***

5. Applicant's arguments filed April 04, 2010 have been fully considered but they are not persuasive.

a. Applicant argued Toyoda very broadly discloses a softening point of the polyethylene wax including beyond the range of the softening point recited in claim 1. The examiner disagrees. The softening point of Toyoda, would have been obvious to one having ordinary skill in the art at the time the invention was made to have selected the overlapping portion of the range disclosed by the reference because overlapping ranges have been held to be a prima facie case of obviousness, see *In re Malagari*, 182 U.S.P.Q. 549; *In re Wertheim* 191 USPQ 90 (CCPA 1976).

b. Applicant argued Toyoda very broadly discloses the density of the ethylene (co)polymer including beyond the range of the density recited in claim 1. The examiner disagrees. The density of Toyoda, would have been obvious to one having ordinary skill in the art at the time the invention was made to have selected the overlapping portion of the range disclosed by the reference because overlapping ranges have been held to be a prima facie case of obviousness, see *In re Malagari*, 182 U.S.P.Q. 549; *In re Wertheim* 191 USPQ 90 (CCPA 1976).

c. It would have been obvious to one having ordinary skill in the art at the time the invention was made to vary the softening point and density to achieve a desired result. It is well-settled that optimizing a result effective variable is well within the expected ability of a person of ordinary skill in the subject art. *In re*

*Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980. *In re Aller*, 220 F.2d 454, 105 USPQ 233 (CCPA 1955).

d. The office has clearly established a prima facie case of obviousness as outlined above (i.e. all the claimed components are taught by the reference in the claimed amount) and now burden shifts to applicants to establish evidence otherwise or evidence of criticality. Applicants have not shown that any additional data points would be expected to be of similar probative value to the evidence of record.

### ***Conclusion***

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to LATOSHA HINES whose telephone number is 571-270-5551. The examiner can normally be reached on Monday thru Thursday from 8 a.m. to 5 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Marcheschi can be reached on 571-272-1374. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only.

Art Unit: 1797

For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/LATOSHA HINES/  
Examiner, Art Unit 1797

/Ellen M McAvoy/  
Primary Examiner, Art Unit 1797